

OUR DIGITAL EARTH
GEOG 181
Summer 2016

Welcome to OUR DIGITAL EARTH! This course is about you and your place *in the map*. We will examine how geospatial data are collected and used, how geospatial technologies have transformed the way we think and make decisions, and the important societal issues that result from the proliferation of new technologies. We will discuss the use of online mapping, satellite images, crowd sourcing, and mobile technologies for responding to natural disasters, galvanizing underrepresented communities, and embedding spatial information into our daily activities. Over the next 8 weeks, you will have an opportunity to learn different geospatial technologies such as web-based mapping software applications that allow you to create custom maps and create websites to communicate your work with the world over the Web. You will be empowered with the necessary skills to collect, catalogue, and communicate spatial information. I hope you enjoy the course!

This course is self-paced on a weekly basis. Our textbook is online through TopHat and the readings and group exercises will be made available on Monday of each week. All group exercises are due by midnight on Sunday of the week they were assigned. The Assignments and Exams will be available from the beginning of the term and are due on the assigned dates.

The midterm is available from June 20th to July 17th
The Final is available from June 20th to August 12th

INSTRUCTOR

Nicholas Perdue | Office: Condon 160 | perdue@uoregon.edu

Office Hours: I will be available M-F from 10AM to 1PM to answer question via email. In person appointments can be made for on-campus meetings.

REQUIRED MATERIAL

Tophat Our Digital Earth Course Platform:

Each student is responsible for purchasing a Top Hat license for the term and purchasing the Our Digital Earth course material. You should have received an email from Top Hat with instructions on how to purchase the materials. Please let me know if you have not received this email or are experiencing any troubles with accessing the material. The total cost of the Top Hat license and course materials is \$55.00. You can access the materials on your desktop or laptop computers and on your mobile device (phone or tablet) by downloading the Top Hat app.

ArcGIS Online Account:

You will receive an email from Esri (the company that makes the mapping software we will be using in the course) that will provide you with your user account information. Please follow these instructions to complete your registration. You will need this software beginning in Week 1 of the term.

PowerPoint Slides:

Each lecture has a powerpoint slide going over key points. The slides are predominately maps and graphics to support the course content in Tophat, but the highlighted text calls out the key points that will be covered on the exam.

Exams:

The course has two exams, a midterm and a final. The exams need to be arranged and proctored through CAS-IT. You will receive emails from CAS-IT with more details about exam taking, proctoring, and scheduling.

Assignments: There are five assignments for the course. They are all open from the beginning of class, but I recommend completing as you read the corresponding sections.

GRADING (600 points total)

Class and Reading Participation – Completing the questions within Tophat (100 points)

Assignments – 250 points total

Assignment 1 (25 Points)

Assignment 2 (30 Points)

Assignment 3 (30 Points)

Assignment 4 (40 Points)

Assignment 5 (75 points)

Midterm Exam -100 points

Final Exam - 100 points

Forum Participation – 100 points

EXPECTATIONS

- Submit your assignments on time to Canvas. Follow the instructions in the Assignment directions. Late assignments will be penalized 5% per day. Assignments will not be accepted after 10 days past the submission deadline.
- Your final project will not be accepted after the submission deadline. You will receive a 0% if it is not submitted on the assigned deadline.
- We will not be providing a study guide for exams. It is your responsibility to create your own study guide by combining information from lectures, tutorial sessions and the readings.
- Do not plagiarize your work. Make sure that you give credit where credit is due. Please visit UO's Plagiarism website for more details: <http://library.uoregon.edu/guides/plagiarism/students/index.html>

STUDENT ENGAGEMENT

All students will receive participation points. Your points will be earned through viewing and commenting on other students' maps and participating in the online forum.

There are five assignments for the course in which you will make online maps. You will share the maps with other students and review each others' work.

Our class will have a Q&A Forum. This is the place where students post question you may have from the readings, ArcGIS Online, or the assignments. All students will be expected to post both their own questions as well as answers to other students' questions. I will also pose questions to the class, the timing of which will parallel the current week's topic.

The textbook, Our Digital Earth in TopHat, includes student exercises. Each student will be assigned to a group in the beginning of the term and this will be your group for the entire term. Every week, groups will complete assigned student exercises. The exercises are delivered via TopHat, through which you will enter your answers. In addition, in my weekly email, I will provide group discussion questions. The discussion questions may be anything from identifying different applications of landcover analysis to comparing your viewshed results. On Canvas, I will create a discussion forum for each group. This is where you should conduct your group discussion. Your participation points for each student exercise will be earned through your discussion forum.

INSTRUCTOR COMMUNICATION

I will send weekly emails to the class to review the previous week's topics and highlight the upcoming weeks materials. I will also pose questions to get the discussion forum going each week and moderate the responses to keep the conversation on topic.

I will also monitor the course Q&A Forum. This is the forum on which students can post questions and comments from the reading as well as the student exercises. You can also comment on other student questions and comments. Remember that this is an online class; so, you will need to be very specific about your how you state your questions. Use the tips below:

Asking and Answering Questions in an online Q&A Forum:

1. What is the question you're trying to ask? I know that this may seem obvious. But, sometimes people don't really know what their real question is. You may need to think about this a bit.
2. Be specific and succinct.
3. What steps did you already use to try to answer your question?
4. What did you expect to see (this may be relevant if you have an ArcGIS Online question)?
5. What did you see instead (again, more likely associate with ArcGIS question)?

ONLINE DISCUSSION PRACTICES AND ETIQUETTE

Keep in mind the following as you post questions and comments to individual group forums as well as the class-wide Q&A Forum and observe proper online discussion forum etiquette.

1. When posting an answer or comment, delete all extraneous information except the specific phrase, sentence, or comment to which you are commenting.
2. Make sure you are posting to the appropriate thread.
3. If you deviate from a current thread, start a new one with a new header.
4. Read through your question or comment before you post it.
5. Be nice.
6. Refrain from inappropriate and derogatory language.
7. Support your peers.
8. Disagree with comments, but don't engage in personal attacks.
9. Be open to comments that disagree with you.

COURSE SCHEDULE

WEEK 1 - INTRODUCTION

Lecture 1: Introduction to Our Digital Earth, Syllabus Overview

Lecture 2: Spatial Literacy

Reading: Chapter 1: Welcome to the Digital Earth

Chapter 2: Spatial Literacy – **Complete Sections 2.1-2.4**

WEEK 2 – GEOSPATIAL DATA

Lecture 3: Spatial Patterns and Scale

Reading: Chapter 3: Geospatial Data – **Complete Sections 2.5-2.6**

Lecture 4: Geospatial Data

Reading: Chapter 3: Geospatial Data – **Complete Sections 3.1-3.4**

Assignment 1 Due July 3rd

WEEK 3 – GEOSPATIAL TECHNOLOGIES

Lecture 5: Attributes

Reading: Chapter 3: Geospatial Data – **Complete Sections 3.5**

Lecture 6: Mobile Maps

Reading: Chapter 4: Geospatial Technology – **Complete Sections 4.1-4.3**

WEEK 4 - GEOSPATIAL TECHNOLOGIES

Lecture 7: Systems, Satellites, and Sensors

Reading: Chapter 4: Geospatial Technology – **Complete Sections 4.4**

Lecture 8: Systems, Satellites, and Sensors (Continued)

Reading: Chapter 4: Geospatial Technology – **Complete Sections 4.4**

Assignment 2 Due July 17th

MIDTERM: The midterm is due by July 17th

WEEK 5 –MAPS AND APPS

Lecture 10: Map Design Principles

Reading: <https://somethingaboutmaps.wordpress.com/> and <https://cartastrophe.wordpress.com/>

Lecture 11: Making Maps

Reading: Chapter 5: Making Maps and Apps – **Complete Sections 5.1-5.3**

Lecture 12: Storytelling with Maps

Reading: Chapter 5: Making Maps and Apps – **Complete Sections 5.4**

Assignment 3 Due July 24th

WEEK 6 – SPATIAL ANALYTICS

Lecture 13: Spatial and Proximity Analysis

Reading: Chapter 6: Geospatial Analytics – **Complete Sections 6.1-6.2**

Lecture 14: Analyzing Patterns

Reading: Chapter 6: Geospatial Analytics – **Complete Sections 6.3**

Assignment 4 Due August 1st

WEEK 7 – CITIZEN SCIENCE

Lecture 15: Crowdsourcing

Reading: Zook, M., Graham, M., Shelton, T., & Gorman, S. (2010). Volunteered geographic information and crowdsourcing disaster relief: a case study of the Haitian earthquake. *World Medical & Health Policy*, 2(2), 7-33. **(Posted on Canvas)**

Lecture 16: Volunteered Geospatial Information

Reading: Chapter 7: Citizen Science – **Complete Sections 7.1-7.2**

WEEK – GEOSPATIAL CRISIS RESPONSE

Lecture 17: Geospatial Crisis Response and Creating Platforms

Reading: Chapter 7: Citizen Science – **Complete Sections 7.3**

Lecture 18: Privacy, Security, and Politics of Geospatial Technologies

Film: Geospatial technology in the world of security **(Link on Canvas)**

Reading: Chapter 8: Privacy and Security – **Complete Sections 8.1-8.4**

Lecture 19: Future Directions

Reading: Chapter 9: The Future of the Digital Earth – **Complete Sections 9.1-9.2**

Final Review

FINAL PROJECT DUE 8/12/2016

FINAL EXAM: The final exam is due August 12th